



# Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

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Appraisal Stage | Date Prepared/Updated: 04-Mar-2021 | Report No: PIDISDSA28023



**BASIC INFORMATION**

**A. Basic Project Data**

Country Pakistan	Project ID P169071	Project Name Punjab Rural Sustainable Water Supply and Sanitation Project	Parent Project ID (if any)
Region SOUTH ASIA	Estimated Appraisal Date 20-Apr-2021	Estimated Board Date 24-Jun-2021	Practice Area (Lead) Water
Financing Instrument Investment Project Financing	Borrower(s) Islamic Republic of Pakistan	Implementing Agency Local Government Department, Government of Punjab	

Proposed Development Objective(s)

Provide equitable and sustainable access to safely managed water and sanitation and reduce child stunting.

Components

- Project Management
- Water Supply and Sanitation Infrastructure Development
- Behavior Change and Capacity Development
- Service Delivery Improvement

**PROJECT FINANCING DATA (US\$, Millions)**

**SUMMARY**

<b>Total Project Cost</b>	553.00
<b>Total Financing</b>	553.00
<b>of which IBRD/IDA</b>	442.40
<b>Financing Gap</b>	0.00

**DETAILS**

**World Bank Group Financing**

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International Development Association (IDA)	442.40
IDA Credit	442.40

**Non-World Bank Group Financing**

Counterpart Funding	110.60
Borrower/Recipient	110.60

Environmental Assessment Category

B-Partial Assessment

Have the Safeguards oversight and clearance functions been transferred to the Practice Manager? (Will not be disclosed)

No

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

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**B. Introduction and Context**

Country Context

1. **Pakistan is at a crossroads as it deals with the coronavirus (COVID-19) pandemic.** Over the last two decades, economic growth has averaged 4.4 percent a year, below the South Asian annual average of 6.3 percent. The country was making good progress in stabilizing its economy and implementing much needed structural reforms. However, real gross domestic product (GDP) growth (at factor cost) is estimated to have declined from 1.9 percent in FY19 to -1.5 percent in FY20, reflecting monetary and fiscal tightening prior to the outbreak and the effects of COVID-19 containment measures that followed.

2. **In response to COVID-19, the government announced a fiscal stimulus package of US\$7.5 billion.**<sup>[1]</sup> This aimed to: (i) support the health sector in combatting and mitigating the virus; (ii) implement social assistance measures for those adversely affected; and (iii) provide stimulus to businesses and industries to protect productive assets. The financing comprises approximately US\$2.5 billion of additional resources and a re-appropriation from the existing budget. Pakistan has availed of the Debt Service Suspension Initiative and expects US\$1.6 billion to US\$2.4 billion in temporary fiscal space.

3. **Pakistan is facing severe health and economic consequences from the COVID-19 pandemic.** The crisis is expected to lead to a sizeable increase in poverty, reversing the sustained reduction observed over the past 20

<sup>[1]</sup> Estimated USD equivalent for PKR 1.2 trillion stimulus package.



years. Deterioration of health indicators is expected due to demand-side issues induced by the crisis, such as lower utilization of non-COVID-19 healthcare due to fear of contagion and income constraints. The pandemic has also resulted in an increase in the number of out-of-school children.

4. **Human capital accumulation is low.** According to the World Bank Human Capital Index (HCI), if no improvements in health and education service delivery take place, a Pakistani child born today is expected to be only 40 percent as productive as s/he could be by age 18. Stunting among children under five is a fundamental health and development challenge in Pakistan. After four decades of stagnation, the country has made some progress in improving nutrition, but stunting rates remain very high. The latest Pakistan DHS indicates a decline in child stunting from 44 percent in 2011 to 37 percent by 2018.<sup>1</sup> The NNS (2018) indicates an overall stunting rate of 40 percent.<sup>2</sup> These results are broadly consistent and reflect a stunting rate that is very high despite the country's success in poverty reduction, the increase in household investments in WASH infrastructure, improvements in dietary diversity, even among the poorest, the reduction in open defecation and the institutional and policy focus on nutrition.<sup>3</sup>

5. **The absence of significant investment in safe management and disposal of fecal waste coupled with virtually no investment in the treatment of drinking water in rural areas is responsible for the anomaly of persistently high rates of diarrhea and stunting.** The rapid expansion of household investment in latrines has reduced the rate of open defecation across Pakistan from 29 percent in 2004-05 to under 13 percent by 2015. However, the lack of attention to fecal waste management has resulted in an unprecedented concentration of untreated fecal waste near human settlements and the consequent contamination of water and soil. This concentration, coupled with poor hygiene practices and the use of inadequately treated water for drinking purposes, has exacerbated the oral transmission of fecal bacteria, causing diarrhea and environmental enteropathy in young children. The latter causes malabsorption and maldigestion of nutrients in young children, undermining the impact of improved diets and health practices, and leading to a host of growth and developmental issues that are manifested in child stunting.<sup>4</sup> This fecal-oral transmission is especially acute in rural areas where households abstract groundwater from shallow depths for drinking purposes. According to the National Nutrition Survey 2018, 56 percent of the water samples collected from survey households were contaminated with coliforms, with a higher rate in rural areas.

6. **Within Pakistan, while the province of Punjab has fared well in terms of overall poverty reduction, close to one half (48 percent) of the country's poor live in Punjab (which is broadly proportional to Punjab's share of Pakistan's total population). There is significant spatial disparity in poverty across Punjab and human development outcomes are similarly skewed.** Overall child health outcomes are far worse in south Punjab, with an average child stunting rate of 42 percent, as compared to 25 percent in the North and 33 percent in the central districts.<sup>5</sup> Similarly, 18 percent of children age 0 to 5 had an episode of diarrhea in a 2 week period in the southern districts as compared to 12 percent in the central and northern districts.<sup>6</sup> <sup>7</sup> The disparity in health outcomes is mirrored in differences in the quality of water and sanitation services and in the levels of contamination of drinking water as discussed below.

<sup>1</sup> Pakistan Demographic and Health Survey, 2017-18

<sup>2</sup> Pakistan National Nutrition Survey: Key Findings Report. 2018. UNICEF

<sup>3</sup> Mansuri et al. 2018. *When Water Becomes a Hazard: A Diagnostic Report on The State of Water Supply, Sanitation and Poverty in Pakistan and Its Impact on Child Stunting*. WASH Poverty Diagnostic Series. Washington, D.C. World Bank Group. <http://documents.worldbank.org/curated/en/649341541535842288/When-Water-Becomes-a-Hazard-A-Diagnostic-Report-on-The-State-of-Water-Supply-Sanitation-and-Poverty-in-Pakistan-and-Its-Impact-on-Child-Stunting>

<sup>4</sup> Ibid.

<sup>5</sup> Punjab MICS 2017-18

<sup>6</sup> Punjab MICS 2017-18

<sup>7</sup> The prevalence of diarrhea is measured over a 2 week period.



Sectoral and Institutional Context

7. **Access to an improved source of drinking water is high in Punjab, with 98.3 percent households having access through one mechanism or another<sup>8</sup>.** In rural areas, a majority of households secure this access through privately owned hand or motorized pumps, while some are served by piped schemes or community drinking points constructed by government departments or non-government organizations and handed over to community-based organizations to operate and maintain. The sustainability of the public water schemes is low and according the Public Health Engineering Department, a third of the schemes they constructed and handed over are now dysfunctional. While access is high, water quality is a significant issue affecting the health of households in Punjab. According to the Pakistan Council of Research in Water Resources (PCRWR) about a third of all drinking water sources, across Punjab, were contaminated with E. coli, at source.<sup>9</sup> Contamination rates in public water systems were significantly higher than in water taken from motorized pumps. The Punjab MICS 2017-18, finds very similar numbers more than 7 years later. Across Punjab, 36 percent households had E. coli in their source water, and this percentage increases to 60 percent when assessing E. coli in household drinking water. Overall, less than one in two rural households across Punjab have access to safely managed water.<sup>10</sup> Given the high rate of self-provision, high rate of dysfunctionality among public schemes, and poor water quality, it is fair to say that rural Punjab is broadly unfamiliar with professional water service delivery by the public sector.

8. **Among rural households in Punjab, 73 percent are seen as having access to improved sanitation.<sup>11</sup>** However, only 4.9 percent have access to flush/pour-flush latrines connected to a sewer system, and another 50 percent have access to flush/pour-flush latrines connected to septic tanks with any overflow leading to a communal drain. These can be relatively safe if properly engineered and the sludge properly disposed of, but neither of those conditions is routinely met in rural Punjab<sup>12</sup>. Many septic tanks are so poorly constructed that they routinely develop cracks – thereby contributing to groundwater contamination. The other types of toilets considered “improved” are variants of pit latrines which are clear contributors to groundwater contamination, particularly in areas where the water table is shallow. Of the remaining 27 percent, 7 percent use unimproved sources and close to 20 percent practice open defecation. Across Pakistan, Punjab has the highest rate of open defecation, despite being the province that has made the most progress on poverty.

9. **There is virtually no public investment in the treatment and safe disposal of wastewater and fecal sludge.** Typically, wastewater from these poorly engineered septic tanks flows through village lanes in open drains and empties into a pond intended for treatment through natural processes, or into a canal or stream where no further treatment occurs. The vast majority of these ponds have become stagnant pools filled with waste and with no capacity to treat fecal waste. The rapid expansion of poor quality toilets over the past two decades is likely a major source of the endemic bacterial contamination of surface and groundwater and the lack

<sup>8</sup> Punjab MICS 2017-18

<sup>9</sup> PCRWR (2011)

<sup>10</sup> Safely managed water is defined as “Percentage of household members with an improved drinking water source located on premises, free of E. coli and available when needed”. Source: MICS Punjab (2017-18).

<sup>11</sup> Punjab MICS, 2017-18 defines an improved sanitation facility, “as one that hygienically separates human excreta from human contact. Improved sanitation facilities include flush or pour flush to piped sewer systems, septic tanks or pit latrines, ventilated improved pit latrines and pit latrines with slabs”. Data taken from MICS Punjab (2017-18).

<sup>12</sup> Only 36 percent of households with septic tanks reported emptying it once, while 95 percent of those that had emptied their septic tanks, did so manually without any protection.



of progress on diarrhea and other water borne diseases and child stunting despite a significant reduction in open defecation, which fell nationally from 29 percent in 2004-05 to 13 percent by 2014-15.<sup>13</sup>

**10. The gaps in sanitation and wastewater treatment directly impact on the quality of drinking water.**

While drinking water is accessed through a variety of mechanisms in rural Punjab, most rural households in Punjab rely on groundwater as the main source. The relatively shallow depth of the groundwater and the permeability of the soil mean that pollutants from the land surface can move directly to the water table without much filtration. In addition to unmanaged human, solid and animal waste, agricultural effluent and randomly discarded solid waste are known contributors to drinking water quality problems. In addition to these anthropogenic sources of contamination, groundwater (and therefore drinking water) in parts of Punjab contains geogenic contamination in the form of arsenic and fluoride. A further common source of groundwater quality problems is the natural salinity present in groundwater which can be exacerbated by inappropriately designed infrastructure.

**11. Poor solid waste management and animal fecal waste management in rural areas also contribute to the fecal contamination of the village environment, including the contamination of water resources.**

**12. Underlying the poor outcomes of the rural water supply and sanitation sector are institutional issues that are reflected in the low sustainability of past public investments coupled with their poor targeting.**

- (a) **There is a high rate of dysfunctionality among existing water supply schemes.** According to the Public Health Engineering Department, Government of Punjab, as of August 2019, out of a total of 5,137 rural water supply schemes created through public programs, 1,784 were found to be dysfunctional. Of those that are functional, a large number are performing below design parameters, providing unsafe and intermittent water supply. This is compounded by poor operations and maintenance (O&M), resulting from the practice of transferring responsibility for the schemes to communities who lack the technical and financial capacity to operate these schemes.
- (b) **The near absence of any tariff collection is a major driver of poor financial sustainability of water and sanitation services.** Where tariffs are imposed and collected for public water supply schemes, the tariff is not designed to cover major repairs, treatment, or upgradations/extensions resulting in eroding infrastructure over time. This sets in motion a cycle in which the deteriorating quality of water supply services negatively impacts the willingness of households to pay for water, further deepening the cycle of unsustainability. In most cases, where water is largely self-provided, rural households pay for water in three ways. The first is the cost of electricity for pumping water, the second is the payments made for health care needs associated with water borne diseases and the third is lost days of work and low productivity due to morbidities related to water borne pathogens.
- (c) **When it comes to sanitation, there has been virtually no public investment in rural Punjab in the safe disposal of fecal waste and wastewater treatment.** Though 'sanitation' is a part of WASH allocations in provincial development budgets, less than 10 percent is allocated to this crucial subsector. Moreover, sanitation expenditures also include village civil works (e.g. construction of soling/pavement) that are, at best, tangentially related to sanitation and hygiene.

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<sup>13</sup> PSLM 2004-05 and 2014-15



- (d) **Public spending on WSS in Punjab has historically suffered from a lack of targeting and WASH budget allocations to districts do not reflect district need as measured by indicators of access to and quality of water and sanitation.**

**13. In 2019, the Government of Punjab passed into effect four key pieces of legislation that underlie governance in the water supply and sanitation sector.** These are the Punjab Water Act (PWA) 2019, the Punjab Local Government Act (PLGA) 2019, the Punjab Village Panchayat and Neighborhood Council Act (PVPNCA) 2019<sup>14</sup>, and the Aab-e-Pak Authority Act (APAA) 2019. These have put the governance structure for rural WSS service delivery in flux, but collectively these hold the promise of a very significant shift towards the sustainable management of water resources and a move towards higher quality WSS service delivery. However, more work is needed to clarify the division of responsibilities between the institutions created/empowered by these Acts and between them and existing government departments. There is also a serious need for the creation of a system for monitoring service quality and resource allocation decisions to create better incentives for accountability.

### C. Proposed Development Objective(s)

Development Objective(s) (From PAD)

**The project development objective is to provide equitable and sustainable access to safely managed water and sanitation and reduce child stunting.**

Key Results

#### PDO Level Indicators

- (a) Number of beneficiaries provided safe drinking water in areas with high exposure to heat stress and water scarcity (6 million)
- (b) Number of villages provided with wastewater treatment facilities that mitigate risk of fecal contamination of water resources in heat stressed and water-scarce areas by generating safe effluent (*2000 villages*)
- (c) Percentage of households that have WHO quality drinking water at point-of-use (*75 percent*)
- (d) Percentage of O&M costs covered through tariff collection (*75 percent*)
- (e) Reduction in the incidence of stunting among children aged 0-3 (*40 percent*)

### D. Project Description

**14. The proposed project will combine infrastructure investments with a comprehensive behavior change and communication (BCC) campaign to:** (i) provide potable water through cost-effective and sustainable

<sup>14</sup> The PVPNCA 2019 was repealed in February 2021 through an amendment to the PLGA 2019. The result was the Punjab Local Government (Amendment) Ordinance 2021 that established a new tier of local government at the village level called Village Councils, which incorporated the main functions of village panchayats prescribed in the PVPNCA 2019 with regard to water, sanitation, and waste management.



investments; (ii) provide safely managed sanitation facilities to reduce the total fecal burden in the village environment; and (iii) raise awareness and promote behavior change for better hygiene practices at the household and community level to promote health and ensure the sustainability and quality of the water source.

15. **The project design will combine these three anticipated outputs to ensure:** (i) significant progress on SDG 6 with a focus on SDG 6.1, 6.2, 6.3, and 6.B<sup>15</sup> in project areas; (ii) improved nutritional health among young children measured by a decrease in the incidence of diarrhea 12 months after the interventions are fully rolled out in a village and an increase in birth weight and a reduction in child stunting 24 and 36 months after the interventions are fully rolled out in a project village; (iii) improved adult health and productivity, measured by days of work lost to illness and out of pocket health care costs related to diseases acquired through the fecal oral route; (iv) more hygienic public spaces with lower plastic use and better waste management; (v) water resource conservation and water quality monitoring; (vi) higher levels of community engagement in village and household hygiene and in monitoring and guiding resource allocation decisions through an IT-based MIS and a strong focus on participation by women.

16. **The Project supports four components, a brief explanation of each of them is as follows:**

17. **Component 1: Water Supply and Sanitation (WSS) Infrastructure Development (US\$ 477.7 M).** This component will address the infrastructure gaps in the existing traditional rural WSS systems that underlie the low access to safely managed water and sanitation in rural Punjab. The water supply systems will predominantly consist of piped metered household connections that are supplied water through canal-side pumps after treatment to ensure adequate quality for drinking purposes, in line with WHO standards. Existing infrastructure will be incorporated and rehabilitated/improved where feasible. For settlements that cannot be feasibly connected to these canal-seepage based schemes, alternative options will be considered and operated in accordance with the project's emphasis on groundwater sustainability, adequate water quality, and high standards of service delivery. The sanitation systems will consist of a covered conveyance system that connects household toilets to a location for wastewater treatment and safe disposal or reuse. The project will support wastewater treatment, with a preference for Anaerobic Baffled Reactors (ABRs) as the main treatment units due to their low capacity requirements for O&M and comparatively lower costs compared to quality of effluent generated coupled with the elimination of need for septic tanks to intercept sewage before the treatment chamber. Fecal sludge will also be treated and safely disposed or reused as fertilizer. The existing open drains will be cleaned and restored for storm water drainage.

18. **Component 2: Behavior Change and Capacity Development (US\$ 16.1 M).** This will finance activities that facilitate and induce health protective behavior change and build community capacity to support WSS service delivery. The component will focus on providing residents of villages with information on the health and environmental impacts of poorly managed water and sanitation, and household and community behaviors that exacerbate these impacts. The project will train women in the village to become agents of change and will

<sup>15</sup> SDG 6: Clean water and sanitation. SDG 6.1: Safe and affordable drinking water. SDG 6.2: End open defecation and provide access to sanitation and hygiene. SDG 6.3: Improve water quality, wastewater treatment and safe reuse. SDG 6.B: Support local engagement in water and sanitation management.



support Covid-19 mitigation measures, awareness-raising and information campaigns related to safely managed water and sanitation and training and capacity building of village-level institutions.

19. **Component 3: Service delivery Improvement (US\$ 42.3 M).** This will include: the establishment of a Service Delivery Unit (SDU) in each project Tehsil that will be responsible for the quality of WSS infrastructure built under the project, as well as its maintenance and management, and all other aspects of day-to-day service delivery; a subcomponent on Solid Waste and Animal Waste Management; and Institutional Development and Alignment with Punjab Governance Structure.

20. **Component 4: Project management (US\$ 16.9 M).** This will include: Project Monitoring through a customized Management Information System to track project implementation progress, WSS service delivery performance, the flow of public and donor funds earmarked for water, sanitation and hygiene (WASH) and related financial management information, and outcome indicators; Strengthening of Project Implementation and Management Unit (PMIU), the key implementation tier with responsibility for overall coordination, planning, and reporting; and a grievance redressal mechanism.

## E. Implementation

### Institutional and Implementation Arrangements

21. **The project will be steered by a Project Steering Committee (PSC), headed by the Chairman, Planning & Development Board, Government of Punjab. The PSC will act as the provincial coordination platform for the project on behalf of the Government of Punjab.**

22. **Another layers of government oversight will be developed upon approval by the PSC, as part of the project implementation arrangement, which will be positioned to continue oversight and steering functions of the SDU-TOs after the project is over and the PSC is dissolved.** This will be either the Divisional Steering Committee or the District Steering Committee.

23. **The Punjab Water Resources Commission and the Punjab Water Services Regulatory Authority were created by the Punjab Water Act 2019.** However, neither is currently fully operational and granting licenses to water and sanitation undertakers to abstract water, dispose into waterbodies, deliver services, and impose tariffs. Once the system created by the PWA 2019 is in place, the service delivery structure of the project will align itself with the provisions of PWA, the flexibility for which has been built into the project implementation arrangements. This will provide an additional layer of regulatory oversight, with a focus on service quality, water quality, resource sustainability, fair pricing, and equity.

24. **The core project implementation functions will be undertaken by the Project Implementation and Management Unit (PMIU) which will be linked to the Implementing Agency - Provincial Local Government Department.** The PMIU will be established and registered as a public-owned Section 42 company and function as the Head Office of the Service Delivery Unit (SDU). The SDU Head Office (SDU-HO) will be the apex body of Tehsil Offices (or field offices) that will deliver routine operations and maintenance services to all villages in their respective tehsils. The SDU Tehsil Offices (SDU-TO) will coordinate with Community Caretakers and Operators (CCOs) who will assist with day-to-day one-button/one-lever infrastructure operations and support for tariff



collection. The CCOs that may be drawn from Village Councils, Village Organizations, or just village residents. This three-tier system of service delivery will be made financially self-sustainable and remain a permanent institutional arrangement for WSS service delivery after the project closes. The service delivery structure is shown in Figure 1.

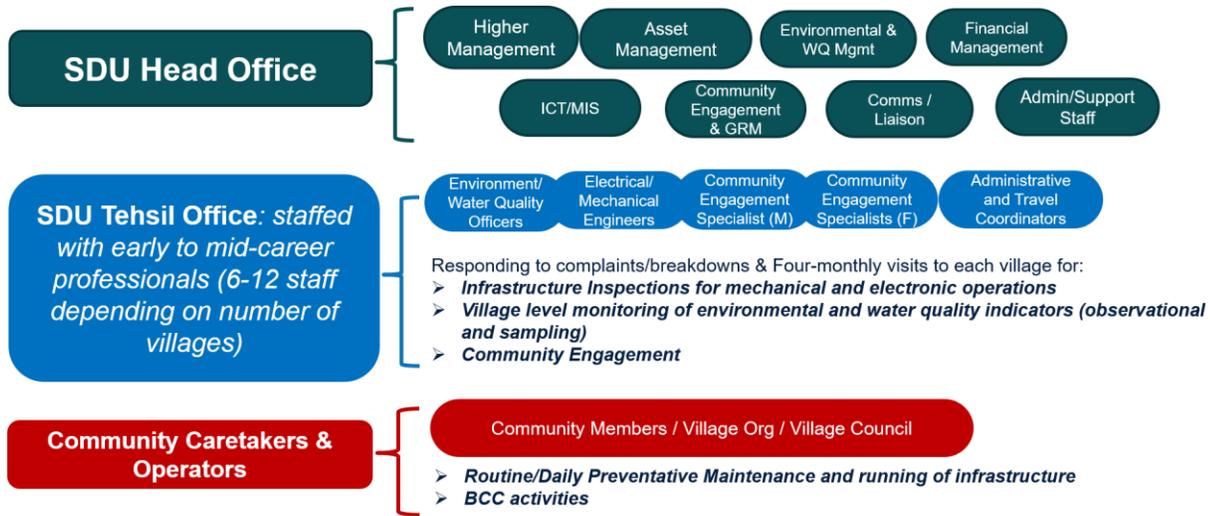


Figure 1 Service Delivery Model under PRSWSSP

25. In its capacity as PIMU, the SDU-HO will be responsible for project implementation including technical implementation, fiduciary and safeguards compliance, legal compliance, monitoring and evaluation, etc. It will be supported by consultants, NGOs, and Third Party Monitors to support engineering design, quality assurance, social mobilization, ICT integration, etc.

26. The project implementation arrangement and a snapshot of the plan for transition to post-project WSS service delivery is shown in figure 2.

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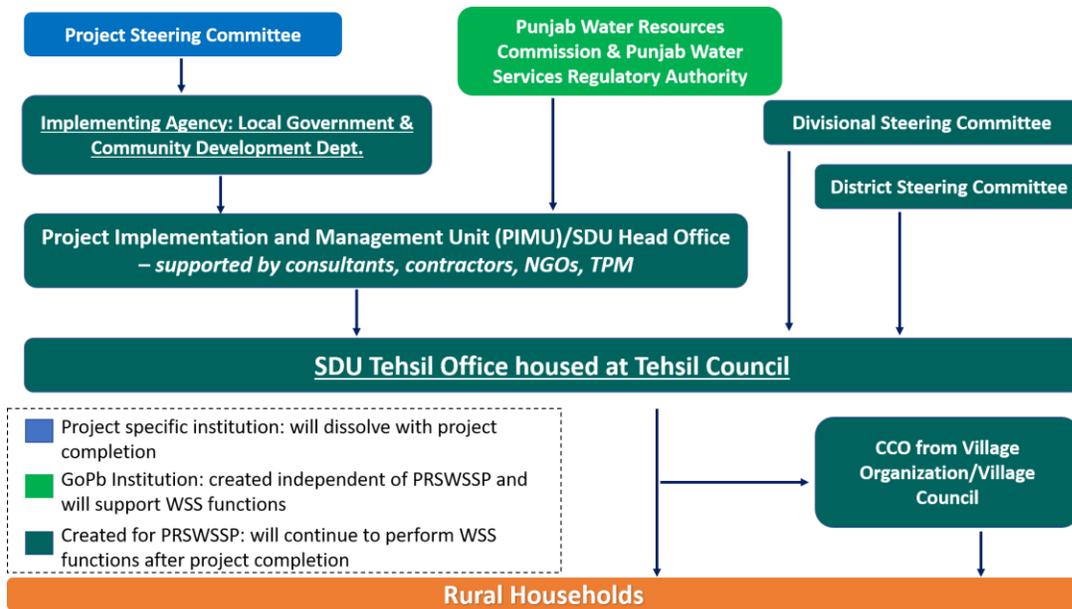


Figure 2 Project Implementation Arrangement and transition to post-project service delivery

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**F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)**

The project will be implemented in 16 districts of Punjab province that are the poorest and have the worst outcomes on child stunting, access to and quality of sanitation infrastructure, and bacterial contamination of drinking water at source and at point of use. Climatically, Punjab is characterized by extremes of heat and cold with fluctuations in temperatures seasonally and, regionally from north towards south.

Topographically, most of Punjab is an extensive plain with some mountainous and hilly areas on the northwest and south west extremes and sandy desert in the south east. The mountainous region and hills in the north western part are the sub Himalayas or Siwalik range. The height of these mountain ridges varies from 2000 to 2500 meters above sea level. Climatically, Punjab is characterized by extremes of heat and cold with fluctuations in temperatures seasonally and, regionally.

Punjab’s water supply is dependent on groundwater, which in southern part is mostly brackish. In rural Punjab, 41% of the households that rely on groundwater, either practice open defecation or use pit latrines. This combination enables fecal-oral route which leads to diarrhea and stunting (Pakistan WASH Poverty Diagnostics). The incidence of diarrhea (17.4%) and prevalence of stunting (36.7%) are high and persistent in rural Punjab e.g. diarrhea was the fourth largest reason for death in 2016 (36,862 children died). In rural Punjab, about 97% households use improved water but access to water piped into dwellings is only 4.6% and declining. Among those with access to piped water supply, about 92% receive less than 6 hours of piped



water supply. Punjab has the lowest level of access to piped water at 18%, compared to 33% in Baluchistan, 35% in Khyber Pakthunkhwa and 41% in Sindh.

Inadequate sanitation is one of the major determinants of high levels of stunting and malnutrition. 67 percent of Pakistan’s rural population now has access to sanitation compared to 23 percent in 1991. However, closing the gap that exists due to inequities between urban and rural residents in terms of improved access to water and sanitation services, remains a challenge. 25.4 percent of the rural population of Punjab defecates in the open with poorer districts experiencing even higher levels. About 50 percent of the households have access to flush/pour-flush latrines that are generally connected to septic tanks with overflow arrangements leading to a communal drain. In the absence of regulatory oversight and any enforcement of design standards, septic tanks are either poorly designed and/or are manually emptied without any protection, with the fecal waste disposed into nearby water bodies or open spaces, causing water and soil contamination.

Rural Punjab is home to 63 percent of Punjab’s population children in rural Punjab are much more likely to be underweight or stunted. Children in Dera Ghazi Khan Division are twice more likely underweight and stunted (44 percent and 47 percent) than children in Rawalpindi division (21 percent).

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**G. Environmental and Social Safeguards Specialists on the Team**

Rahat Jabeen, Environmental Specialist  
Babar Naseem Khan, Social Development Specialist

**SAFEGUARD POLICIES THAT MIGHT APPLY**

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	This OP is triggered because the project interventions under Component 1: <b>Water Supply and Sanitation Infrastructure Development</b> ” such as: construction and provision of sanitation infrastructure (including drainage networks, wastewater treatment options, septic tanks etc.) and water supply infrastructure (including provision of water supply networks with skimming wells, pumping stations, reverse osmosis treatment, disinfection, etc.) may have some



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negative impacts on the environment during the construction phase, such as soil and water contamination due to improper project siting, improper disposal of waste, contamination of open irrigation water channels to be used as a source, excavation and digging of trenches for laying pipes, excessive noise related to use of machinery, vehicular movement and tube well boring operation. In addition, health and safety issues are also anticipated due to improper handling of construction machinery, unprotected deep excavation and non-compliance with the SOPs/ guidelines related to COVID-19 and safety guidelines.

Similarly, the adverse impacts during the implementation phase may include health and safety issues due to use of chlorine for water treatment/disinfection which includes malpractices related to storage, improper application and/or handling, possibility of bad smell. In addition, improper wastewater treatment operation may create conditions conducive to breeding of mosquitos.

Most of these impacts are, however, moderate, temporary, site-specific, reversible, not unprecedented and can be avoided, reduced or mitigated through better engineering design/practices and applying simple and cost-effective mitigation measures.

The social impacts are related to accessibility issues, potential elite capture, and inequitable distribution of benefits to project beneficiaries including vulnerable and marginalized groups.

Small-scale contractor firms will likely be needed for construction work under the project, which might pose occupational health and safety related challenges for labor staff.

Performance Standards for Private Sector Activities OP/BP 4.03	No	This policy is not triggered as project interventions are not associated with known private sector.
Natural Habitats OP/BP 4.04	No	This policy is not triggered as project interventions are not planned in natural habitats at this point and



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		largely planned in areas that are already built/transformed.
Forests OP/BP 4.36	No	Project interventions do not involve any forest areas. Therefore, this policy is not triggered
Pest Management OP 4.09	No	The project interventions do not use any pesticides and hence this policy is not triggered.
Physical Cultural Resources OP/BP 4.11	No	The policy is not triggered. The project activities do not involve large excavation and are not expected to impact the cultural resources. However, chance find procedures are included in the ESMF as precautionary measures. On a similar note precautionary procedures would be included in subsequent SG documents such as ESMPs, and followed if needed.
Indigenous Peoples OP/BP 4.10	No	No indigenous people as defined in the Policy are known to exist in the area. Hence OP 4.10 is not triggered.
		OP 4.12 is triggered as some project interventions may need to acquire land (e.g. for water filtration plants, holding and overhead tanks, basic filtration unit, drainage and disposal). In most instances, small parcels of land will be required for project interventions. In addition, right of way might be required through agricultural fields in a few cases, where the water source is located away from the point of use. Certain interventions may also involve minor temporary impacts on livelihoods (due to restricted access during construction; temporary displacement of vendors/hawkers etc.) which could require small scale compensation.
Involuntary Resettlement OP/BP 4.12	Yes	For any land requirements under the project, use of Government lands and voluntary land donation (VLD) will be the preferred mechanisms. A Resettlement Planning Framework (RPF) has been developed as part of the ESMF. It contains relevant procedures and documentation requirements at the project level, including the criteria for accepting donations and process for ensuring voluntariness. The Framework will be consulted upon, and publicly disclosed on the client's website (in-country) and by the Bank prior to appraisal. The Framework will also be accessible and available locally and at the levels of the PIU and district level offices of implementing agencies. Resettlement Action Plans (RAPs), if



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		required, will be subsequently developed and implemented. The VLD process will be monitored closely at the local level to ensure that there is no coercion for donations and that community members do not become worse off or lose their livelihood due to the donation.
Safety of Dams OP/BP 4.37	No	The project does not involve or depend on any dam related activity.
Projects on International Waterways OP/BP 7.50	Yes	The proposed project activities are located in the command area of tributaries of the Indus River, which is an international waterway (river). The proposed project activities under component 1 qualify to trigger this policy. The Project however has got the PAD cleared from Legal department. An exemption for notification has been approved by the SAR VP. More than 86% households have backyard groundwater abstraction arrangement, the project is expected to decrease the net groundwater withdrawals due to water metering and BCC.
Projects in Disputed Areas OP/BP 7.60	No	The project is not located in a disputed area.

**KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT**

**A. Summary of Key Safeguard Issues**

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

The nature of the project is such that no large scale or irreversible negative social impacts are anticipated. In fact, the project is expected to bring about positive and direct social impacts at the household level in the target area within a short span of time. However, few negative impacts of temporary nature are envisaged, most notably through requirement of small land parcels for constructing the water supply or sanitation infrastructure at the village level. In most cases, the land requirement is expected to be fulfilled through government owned land or communal lands (Shamilat). The project safeguard category has been assessed as B with partial assessment.

Component 1 “Water Supply and Sanitation Infrastructure Development” of the project include activities such as: construction and provision of sanitation infrastructure (drainage networks, wastewater treatment options, septic tanks etc.) and provision of water supply infrastructure (water supply networks with skimming wells, pumping stations, reverse osmosis treatment, disinfection, etc.). These activities are likely to have some adverse environmental impacts.

In addition, health and safety issues are also anticipated due to improper handling of construction machinery, unprotected deep excavation and not complying with the SOPs/ guidelines related to COVID-19.



Most of these impacts are however moderate, temporary, site specific, reversible, not unprecedented and can be avoided, reduced, or mitigated through better engineering design/ practices and applying simple and cost-effective mitigation measures.

The applicability of sanitation and water supply technologies has been assessed through an investment options study. Any failure of the selected technology at the implementation stage in providing the promised benefits will negatively impact the social acceptability of the project.

GBV/SEA risks are low since no labor influx of scale is expected in the construction works nor women labor force participation is expected at a considerable scale. Also, the project contributes to minimizing SEA risks by removing disproportionate access of WASH facilities to women, which usually forces them to move out of the house for defecation and otherwise (putting them at risk of GBV/SEA).

Water governance in Punjab has several overlapping stakeholders, including many line departments, local governments, and in many cases the civil society including politicians. This institutional complexity may limit implementing agencies' ability to effectively complete activities within timelines. The project targets the poorest districts of the province that house relatively more vulnerable or disadvantaged groups.

Other potential social impacts are related to lack of labor standards compliance for construction labor, absence of social security benefits, unsafe working conditions, workplace accidents, below minimum wage payments, and use of child labor.

The overall environmental impact of the project investments is however expected to be positive. As the project activities will contribute towards a healthier and improved environment in project areas besides reducing diarrheal diseases attributed to poor WASH conditions. These will in turn contribute in reducing cost of health care, and in lost productivity and income due to illness as well as significant reductions in child stunting and associated lifetime cognitive and learning deficits among children, the treatment of fecal waste and the resulting removal of bacterial pathogens from water bodies and the environment, will also have downstream health and environmental benefits.

## 2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

Potential indirect and/or long term impacts due to anticipated future activities in the project area because of this project will largely be positive as the implemented activities shall: further improve the environmental and living conditions by improved access to water and sanitation facilities; better solid waste management practices coupled with project supported enhanced capacity and awareness of beneficiary communities. Further the project is expected to decrease the net groundwater withdrawals due to water metering and BCC; as currently more than 86% households have backyard groundwater abstraction arrangement that would likely to adopt new practices/option.

In the presence of various other water governance stakeholders, the Village Council will play a key role in deciding about the siting and later, deliver, own and maintain the infrastructure provided under the project, which will make it socially acceptable, enabling the Village Councils to exercise much broader influence in the developmental plans for their respective areas. This in turn, will mean that development needs are not only truly identified from the grassroots, but also the decision making is done through real consent of the beneficiaries.

Success of the project will help replicate the service delivery model applied under the project first to other Tehsils of the target districts, and then to other areas of the province in general.



3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

The analysis of the alternatives was a part of ESMF to select the best among all possible project options. The ESMF underpins that the alternatives of a project are the options that could help to meet the objectives by different means including alternative project sites, technology or material, design or inputs. The key criteria when identifying alternatives is that they should be feasible and reasonable, environmentally sustainable, and socially acceptable.

Selection of preferred alternative should be based on scores of factors including cost, schedule of delivery, environmental and social impact, and the cost for their redressal.

The ESMF suggests different types of alternatives that would be analyzed and assessed during preparation of the sub-project SG instruments, depending upon its environment and social category defined by the operational policies above. These include: (i) no action alternative; (ii) design alternative; (iii) site alternatives; (iv) technological alternatives; and (v) any other type of alternative relevant to the type of sub-project.

Small parcels of land will be needed under the project for construction of water storage tanks or sanitation related infrastructure. As the adopted alternative, the project will utilize government land for this purpose as the first choice. If government land is not available, or if the beneficiary population does not deem it suitable, then community owned land will be used. Only in very rare cases, private land could be utilized for the project, through Voluntary Land Donation. Besides, right of way might be required through agricultural fields in few cases, where the water source is located away from the point of use. The project will use existing right of way of any utility (road, street, canal etc) to maximum possible extent. If laying pipe network through private lands is unavoidable, the project will prefer unirrigated lands belonging to the people of beneficiary villages. Using lands of any village that is not a direct beneficiary of the project will be avoided. Every land parcel used in the project will be after free, prior, informed, and written consent of the owner(s).

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

The Government of Punjab through its LG&CD department – the implementing agency (IA) - has conducted a detailed E&S assessment as required by World Bank policies and practices. As the exact location and type of project interventions are not known at appraisal, the Implementing agency has used a framework approach and prepared an ESMF that has identified the potential adverse environmental and social impacts against each sub-component /activity, suggested generic mitigation measures and provided detailed guidance for the process to be followed. ESMF also provides a criterion for environmental and social screening of each sub-project, based on land acquisition / resettlement impacts on number of households and environmental factors. The screening would lead to adopting an appropriate SG document. ESMF screening will classify each sub-project into three categories to adopt an appropriate safeguard approach. The three screening categories include: E1 sub-projects; All those sub-projects having negative environmental impacts of severe nature (significant, widespread, irreversible and/or unprecedented will be categorized as E-1; though it is expected that no sub-projects will fall under E-1. *However, such type of subprojects will not be financed by WB under PRSWSSP*; E2 sub-projects that may have some negative impact that is localized and temporary environmental and social impact that will require preparation of EMPs (particularly for construction related activities); and E3 sub-projects that may have minimal environmental impacts; and will require simple checklists with some mitigation measures.

A Resettlement Planning Framework (RPF) has been developed as part of the ESMF. It contains relevant procedures and documentation requirements at the project level. The project will also make use of WB Group “Environment, Health,



and Safety (EHS) Guidelines” and comply with the COVID-19 related SOPs/ WHO guidelines to address health and safety issues likely to occur during project implementation.

The borrower capacity to ensure good environmental and social management of the project and avoid negative impacts will need to be strengthened in the form of engaging fulltime social and environmental experts. The ESMF provides clear guidance on environmental and social management and compliance monitoring that will be carried out by the Environmental and Social Specialists (ES and SS) of PIMU. PIMU will house two experts, one for environment and the other for social & GRM. The latter will be responsible for both, social development and grievance related works. In addition, a Gender Specialist will also be hired at the provincial level. Since the project will be implemented simultaneously in 16 districts, 16 E&S experts (one for each tehsil) who will ensure environmental and social compliance. The 16 officers at tehsil level will report to the three PIMU Specialists and work as an integrated team. The additional capacity at PIMU and tehsil offices will ensure that the mitigation plans are regularly and effectively implemented.

All EMPs/ SG documents will become an integral part of relevant BOQ/ bidding document(s) to ensure SG compliance during execution of each sub-project by the contractor. Sub-project EMPs will be clustered based on similarities. The specific EMP/SG document clauses would propose mandatory requirements such as: the contractor and his staff/employees shall adhere to the mitigation measures set out; and take all other measures required by the Engineer to prevent harm, and to minimize the impact of his operations on the environment including, among others: removal of surplus material, proper handling of excavation and borrow pit, proper treatment of effluent before discharging into the water bodies and regular maintenance of machinery and limiting operations during day hours for avoiding excessive noise and air pollution etc.

During execution, the project will also make use of existing institutional set-up of the department at field level to support Environment Specialist at PIMU/tehsil SDU who will interact with contractors/ communities in ensuring SG compliance in project activities. For the purpose, these staff will be prior trained for ESMF/SG compliance, E&S awareness and reporting non-compliances for subsequent follow ups. LG&CDD will ensure SG compliance monitoring at three levels i.e. at the PIMU level, Tehsil level and at field level. At the PIMU level, the Environment, Social & GRM and Gender Specialists will carry out ESMF monitoring to ensure that the mitigation plans are being effectively implemented and will conduct field visits on a regular basis. Tehsil level E&S experts (/Environmental & Water Quality Officers) will be responsible for ESMF implementation monitoring and evaluation at Tehsil level and to technically facilitate the TCs. SDU/ ES will carry out monitoring at field level. SDUs will also conduct consultation with communities especially women and vulnerable groups during execution.

The ESMF also provides guidance on the institutional set up, capacity building and compliance monitoring requirements to implement safeguard (SG) documents. ES and SS will be responsible for handling and managing all aspects related to environmental and social safeguards. S/he will support the monitoring of project interventions, facilitate screening, and review the implementation of mitigation measures. Further, s/he will assess safeguards training needs as guided by ESMF and carry out capacity building/ and training sessions for project/ contractors’ staff, as an ongoing process, and will produce and maintain a good record of all documentation and periodic reporting on SG.

Additionally, it is worth mentioning that mitigating the adverse environmental and health impacts for likely water contamination during operations, is inherently in-built into the project design. For instance, under sub-component 3.3 – water quality monitoring - the project will support regular water quality testing in every village where water supply and sanitation network is provided. In this regard, the project will engage a reputed institute (public or private) with adequate capacity for sample collection and testing against agreed water quality parameters. Similarly the National and Provincial Environmental Quality Standards will be complied for effluent quality in case of wastewater treatment facilities, through sound engineering design and by adopting proper operating procedures; which in turn, will ensure



that wastewater disposal does not cause environmental harm to receiving water bodies or soil. Also as a part of project preparation a “hydrologic study” was conducted; and that monitored existing skimming wells for over 10 hours running. The study found that the water table did not drop. Experiences in different parts of Punjab province also confirm the study findings. The project will however further ensure and conduct hydrologic assessment for every canal where skimming wells will be provided before executing such interventions

The LG&CDD has already nominated an officer as an E&S Focal Person for coordination who deals with the environmental related aspects. PIMU/SDUs will also benefit from the experience already gained for E&S SG compliance while implementing various donor funded projects (WB & ADB); through proactive cross-learning between/among LG&RDD’s different sections/bodies”. The ESMF adequately guides and elaborates several capacity and training measures including hiring of dedicated E&S staff. PIMU will also engage an independent Third-Party Monitoring Consultant (TPM) firm to verify, among others, the effectiveness and adequacy of SG implementation, compliance monitoring and quality of supervision.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

Local communities- who are the direct beneficiaries or affected persons from the program interventions (including vulnerable groups such as women, children, women headed households, people in old age, people with disabilities, landless peasants, people living below the poverty line etc.). Moreover, influential people like numberdars (village heads), religious leaders and landlords etc. might play important role in actual realization of project activities in their particular village and therefore identified as the Primary/Internal Stakeholders.

Local Government and Community Development Department are also identified as primary stakeholders of PRSWSSP. Other institutions that have an important role in enabling the realization of the project interventions and therefore identified as the Secondary/External stakeholders.

As a part of ESMF preparation, client (LG&CDD) carried out stakeholder consultations through various meetings and briefing sessions in selected villages of project districts. The consultations were focused on: project activities, anticipated impacts, WB safeguard policies, mitigation measures and documenting the consultation outcomes (concerns and suggestions). The stakeholders include: (i) local communities - of the selected villages who are direct beneficiaries of the project PRSWSSP; (ii) community leaders, landlords, influential/religious people who can help in mobilization of the community and smooth implementation of the project intervention; and (ii) Government Organizations/Departments (16 Project districts/tehsils) who may play an important role in the strengthening of project activities.

The outcomes of the consultation remained positive; the stakeholders provided their suggestions on overall project designs, its implementation arrangements; and mitigation measures.

Local Communities were of the view that implementing PRSWSSP activities would provide improved sanitation system of the villages and better access to good quality drinking water; that would improve overall health and save them from many water borne diseases; increase crop yields as currently contaminated water was affecting the quality and quantity of their crops; and may help providing livelihood opportunities (temporary employment for construction related activities).



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Consultation with the influential groups, landlords and religious leaders revealed that: land owners would facilitate in community owned land which would be donated by them for project interventions through VLD. They further suggested that project activities may be carried out after harvest period to avoid any inconvenience. The project team ensured that execution of project activities will be planned accordingly.

Consultation with the Government Departments/Organizations proposed that for project implementation; area specific environmental management plans need to be prepared for taking appropriate mitigation measures; training and capacity-building of relevant Government Organizations must be made part of overall implementation processes; community awareness and sensitization must be ensured throughout project; and waste management system should be designed along with awareness campaign to adopt the best solid waste management practices; and treatment of wastewater must be ensured before using for irrigation purposes. The LG&CDD officials and ESMF Consultants briefed that most of stakeholders’ concerns are already covered under the Project design and ESMF procedures would further ensure complying the mitigation measures.

Consultations with these stakeholder groups have been carried out as an essential step in the formation of the ESMF. A stand-alone Stakeholder Engagement Plan has also been developed, providing clear guidelines about the times lines, modes and content of the future stakeholder engagement.

The Stakeholder Engagement Plan has been included in the ESMF, and finalized and cleared by the World Bank and disclosed on client website and Image Bank of the World Bank respectively. Final version of ESMF has been consulted upon, cleared by the WB and disclosed on LG&CDD’s official website on April 22, 2021; and on WB Image Bank on April 22, 2021.

**B. Disclosure Requirements (N.B. The sections below appear only if corresponding safeguard policy is triggered)**

Environmental Assessment/Audit/Management Plan/Other		For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
Date of receipt by the Bank	Date of submission for disclosure	
<b>March XXXX 2021</b>	<b>March XXXX 2021</b>	
"In country" Disclosure	March xxxx2021	
Resettlement Action Plan/Framework/Policy Process		
Date of receipt by the Bank	Date of submission for disclosure	



**"In country" Disclosure**

**C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting) (N.B. The sections below appear only if corresponding safeguard policy is triggered)**

**OP/BP/GP 4.01 - Environment Assessment**

Does the project require a stand-alone EA (including EMP) report?

If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?

**OP/BP 4.12 - Involuntary Resettlement**

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Is physical displacement/relocation expected?

Is economic displacement expected? (loss of assets or access to assets that leads to loss of income sources or other means of livelihoods)

**OP 7.50 - Projects on International Waterways**

Have the other riparians been notified of the project?

If the project falls under one of the exceptions to the notification requirement, has this been cleared with the Legal Department, and the memo to the RVP prepared and sent?

Has the RVP approved such an exception?

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Have relevant safeguard policies documents been sent to the World Bank for disclosure?

yes

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

Yes

### All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Yes

Have costs related to safeguard policy measures been included in the project cost?

Yes

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?

Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

Yes

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